

# ABSTRACT OF THE DISCLOSURE

An information encoding apparatus for encoding N pieces of information, the information encoding apparatus includes a scrambling pattern generation section for generating M scrambling patterns ( $N > M \geq 1$ ; where M and N are each an integer); a scrambled information generation section for applying, to each of the N pieces of information, one corresponding scrambling pattern among the M scrambling patterns so as to generate N pieces of scrambled information; and an encoded information generation section for supplying the N pieces of scrambled information with N parities, respectively, so as to generate encoded information. Each of at least one of the M scrambling patterns is applied to two or more of the N pieces of information.